GOVERNMENT OF INDIA
NON-CONVENTIONAL ENERGY SOURCES
LOK SABHA

STARRED QUESTION NO:57
ANSWERED ON:04.12.2003
GENERATION OF NCES
T.T.V. DHINAKARAN

Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:

(a) the target fixed for the generation of non-conventional energy for the Tenth Plan period, category-wise;

(b) the funds allocated so far under the Tenth Five Year Plan to achieve this target, State-wise and category-wise; and

(c) the steps taken to use advanced technology to exploit renewable energy sources?

Answer

MINISTER OF STATE OF THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI M. KANNAPPAN)

(a), (b) & (c) : A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a), (b) & (c) OF LOK SABHA STARRED QUESTION NO. 57 FOR ANSWER ON 4.12.2003 REGARDING GENERATION OF NCES.

(a): An aim of 10 per cent of the new power generation capacity addition in the country from non-conventional energy sources, i.e., wind, small hydro, biomass, and solar has been set for the 10th and 11th Plans. In this respect, the power generation capacity addition from non-conventional energy sources for the 10th Plan, is envisaged at 3075 MW. In addition, targetshave been set for various decentralized non-conventional energy systems / devices. The details in this regards for 10th Plan are given in Annexure-I.

(b): The Gross Budgetary Support (GBS) to this Ministry to achieve targets during the 10th Plan has been set at Rs. 4000 crores. State-wise and category-wise funds released during 2002-03, i.e., the 1st year of the 10th Plan, are given in Annexure-II.

(c): The use of advanced technologies to exploit renewable energy sources is being encouraged through various financial and fiscal incentives, including concessional custom and excise duties. Financial support provided for R&D has led to the deployment of advanced technologies in biogas, biomass gasification and solar thermal areas.

Annexure-I

Annexure-I referred to in reply to part (a) of Lok Sabha Starred Question No. 57 for 4.12.2003 regarding generation of NCES.

Physical Targets set for the 10th Plan

A: Power from Renewables during 10th Plan

Source	Target (MW)
Wind Power	1500
Small Hydro Power	600
Biomass Power / Bagasse Co-generation	700
Biomass Gasification	50
Waste to Energy	80
Solar Photovoltaic Power	5
Solar Thermal Power	140
Total	3075

B : Decentralized Energy Systems during 10th Plan

System	Target
Biogas Plants (Nos. in lakhs)	10

Solar Photovoltaic Home Lighting Systems (Nos. in lakhs) - 2.5
Solar Photovoltaic Power Plant /Other Systems (MW) - 4
Solar Photovoltaic Pumps (Nos.) - 8,000
Solar Photovoltaic Generators (Nos.) - 10,000
Wind Pumps (Nos.) - 800
Hybrid Systems (kW) - 800
Solar Water Heating Systems (sq. m. collector area in lakhs)- 5
Solar Air Heating Systems (sq.m. collector area) - 5,000
Solar Cookers (Nos. in lakhs) - 2.05

C : Remote Village Electrification - Electrification of all remote unelectrified villages

State-wise and category-wise fudns released during 2002-03 of the 10th Plan.

Sl. No.	STATES/UT /NBP	Biogas CBP/IBP Chulha	Improved Power Wastes	Solar Power Small Aero.	SHP Gasifier	Biomass from	Biomass Thermal	Energy Demo.	Solar Pump &	SPV Pumps	Wind Power	SPV Parks	Wind Elect.	IREP	Energy	Village	Total
1.	Andhra Pr	4.280	0.000	0.2500	0.480	2.200	10.697	0.009	1.6700	0.480	1.6700	0.006	0.000	0.040	0.164	0.460	1.085	23.490
2.	Arunachal Pr	0.130	0.030	0.0000	0.000	12.900	0.068	0.283	0.0000	0.000	0.3900	0.000	0.000	0.000	0.104	0.320	0.934	15.158
3.	Assam	0.000	0.000	0.0000	0.000	0.000	0.050	0.005	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.290	0.460	0.805
4.	Bihar	0.000	0.000	0.0253	0.000	0.002	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.047
5.	Chhattisgarh	2.520	0.000	0.1188	0.000	0.000	0.024	0.003	0.0000	0.000	0.3300	0.000	0.000	0.000	0.148	0.320	5.680	9.144
6.	Goa	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	Gujarat	2.470	0.000	0.0500	0.000	0.000	0.035	0.599	0.0208	0.000	2.0500	0.430	0.920	0.000	0.030	0.370	0.000	6.975
8.	Haryana	0.160	0.200	0.1637	0.050	0.000	0.060	0.030	0.0000	0.050	2.6800	0.000	2.450	0.020	0.191	0.470	0.000	6.525
9.	Himachal Pr.	0.220	0.000	0.0069	0.000	6.680	0.000	0.000	0.0000	0.000	1.2000	0.000	0.000	0.000	0.145	0.000	0.000	8.252
10.	J & Kashmir	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.0000	0.000	1.0900	0.000	0.000	0.000	0.000	0.100	0.000	1.190
11.	Jharkhand	0.030	0.000	0.0000	0.000	0.000	0.000	0.078	0.0268	0.100	0.2500	0.000	0.000	0.000	0.098	0.490	1.058	2.132
12.	Karnataka	5.730	0.000	0.3057	0.000	0.820	1.994	0.190	0.0000	0.000	1.2100	0.000	0.000	1.040	0.050	0.510	0.000	11.849
13.	Kerala	0.090	0.250	0.1150	0.000	0.000	0.000	0.062	0.0000	0.000	0.3800	0.000	0.000	0.000	0.365	0.000	0.000	1.262
14.	Madhya Pr	3.980	0.000	0.0000	0.000	0.270	0.000	0.063	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	1.090	5.453
15.	Maharastra	2.800	0.730	0.0500	0.000	0.170	0.088	0.000	0.0000	0.000	0.2300	1.680	0.000	2.500	0.000	0.620	0.000	8.868
16.	Manipur	0.190	0.000	0.0000	0.000	0.050	0.000	0.000	0.0000	0.000	0.0820	0.000	0.000	0.000	0.000	0.000	7.300	7.622
17.	Meghalaya	0.250	0.000	0.0000	0.000	0.000	0.020	0.060	0.0000	0.000	0.0690	0.000	0.114	0.000	0.120	0.100	3.230	3.963
18.	Mizoram	0.350	0.000	0.0000	0.000	0.060	0.000	0.301	0.0000	0.000	0.5700	0.000	0.000	0.000	0.000	0.000	0.000	1.281
19.	Nagaland	0.000	0.000	0.0000	0.000	0.030	0.000	0.168	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.420	0.000	0.618
20.	Orissa	2.550	0.000	0.7024	0.000	0.000	0.000	0.003	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.255
21.	Punjab	0.000	0.330	0.0608	1.492	1.740	1.033	0.000	0.0000	1.490	0.5700	0.000	8.380	0.000	0.396	0.580	0.000	16.073
22.	Rajasthan	0.070	0.400	0.0000	0.265	0.000	0.343	0.000	0.0000	0.270	6.3400	0.000	0.000	0.000	0.106	0.040	0.000	7.834
23.	Sikkim	0.250	0.000	0.0016	0.000	6.720	0.000	0.000	0.0000	0.000	0.2100	0.000	0.000	0.000	0.023	0.000	0.000	7.204
24.	Tamil Nadu	0.270	0.000	0.1500	0.000	0.080	0.090	0.537	0.0000	0.000	0.7400	0.001	0.000	0.000	0.000	0.040	0.000	1.907
25.	Tripura	0.150	0.000	0.0000	0.000	0.000	0.010	1.047	0.0000	0.000	3.7800	0.000	0.214	0.000	0.075	0.000	0.000	5.276
26.	Uttar Pr	0.000	0.380	0.0000	0.046	0.025	0.331	0.072	8.2833	0.046	7.3400	0.010	0.000	0.000	1.222	0.530	0.000	18.285
27.	Uttranchal	0.150	0.480	0.0039	0.100	1.820	0.000	0.072	0.0000	0.100	2.1700	0.000	0.154	0.000	0.274	0.584	1.880	7.788
28.	West Bengal	4.140	0.100	0.3051	0.087	2.790	0.060	0.532	0.0000	0.087	3.2200	0.110	0.000	1.560	0.000	0.320	2.200	15.510
29.	A & Nicobar	0.000	0.000	0.0000	0.889	3.000	0.000	0.000	0.0000	0.890	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.779
30.	Chandigarh	0.000	0.000	0.0000	0.050	0.000	0.000	0.000	0.0000	0.050	0.0770	0.000	0.000	0.000	0.011	0.000	0.000	0.188
31.	D & N Haveli	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32.	Daman & Diu	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33.	Delhi	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.0000	0.000	0.1800	0.000	0.000	0.000	0.030	0.400	0.000	0.610
34.	Lakshwadeep	0.000	0.000	0.0000	3.920	0.000	0.000	0.000	0.0000	3.920	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.840
35.	Pondicherry	0.000	0.000	0.0000	0.100	0.000	0.000	0.000	0.0000	0.100	0.0500	0.025	0.000	0.000	0.000	0.000	0.000	0.275
36.	Others	14.000	0.500	0.3076	0.105	0.130	1.877	1.440	0.0000	0.110	3.9800	0.000	0.000	4.600	0.000	0.090	0.000	27.140
	Total	44.780	3.400	2.6168	7.584	39.487	16.780	5.554	10.0009	7.693	40.8580	2.261	12.232	9.760	3.552	7.124	24.917	238.599

CBP/IBP/NBP = community/institutional/night-soil biogas plants
SHP = small hydro power;

SPV = solar photovoltaic ;
IREP = integrated rural energy programme